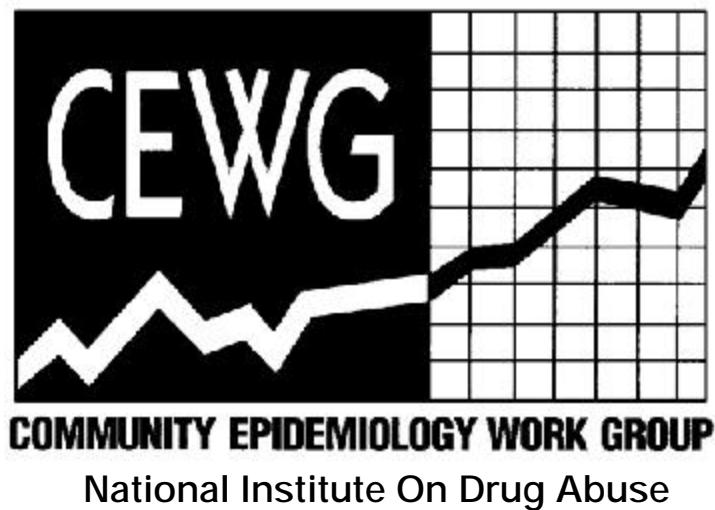


# EPIDEMIOLOGIC TRENDS IN DRUG ABUSE

Community Epidemiology Work Group

December 2001

Volume II: Proceedings



NATIONAL INSTITUTES OF HEALTH

Division of Epidemiology, Services and Prevention Research  
National Institute on Drug Abuse  
6001 Executive Boulevard  
Bethesda, Maryland 20892

The National Institute on Drug Abuse (NIDA) acknowledges the contributions made by the members of the Community Epidemiology Work Group (CEWG) who voluntarily invested their time and resources in preparing the papers presented in this volume. Papers prepared and presented by researchers from Canada and Mexico also are included in this publication.

Editorial services for this volume were provided by MasiMax Resources, Inc., under contract number N01DA-1-5514. Volume I of this publication

includes highlights and an executive summary of the 21 city papers.

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## Foreword

The Community Epidemiology Work Group (CEWG) is a drug abuse surveillance network established in 1976 by the National Institute on Drug Abuse (NIDA), National Institutes of Health (NIH). It is composed of researchers from 21 sentinel areas of the United States who meet semiannually to present and discuss quantitative and qualitative data related to drug abuse. Through this program, the CEWG provides current descriptive and analytical information regarding the nature and patterns of drug abuse, emerging trends, characteristics of vulnerable populations, and social and health consequences.

The 51st meeting of the CEWG, held in San Diego, California, on December 11–14, 2001, provided a forum for presentation and discussion of drug abuse data in the United States, Canada, and Mexico. The venue in San Diego afforded the opportunity for presentation and discussion of drug abuse-related issues of special concern to the local community. These included presentations on three local efforts to combat and treat methamphetamine abuse, a panel discussion by methamphetamine abusers on the problems associated with abuse of this drug, an effort to reduce teen drinking on both sides of the border

(San Diego and Tijuana), and the impact of California's Substance Abuse and Crime Prevention Act (Proposition 36) on the treatment system. An official of the Drug Enforcement Administration described data sources used by the agency to track seizures of MDMA and determine the quality of drugs. A member of the Substance Abuse and Mental Health Services Administration conducted a workshop on the Drug Abuse Warning Network's emergency department data collection methods, reporting procedures, and the new type of information that will be available in the near future.

These wide-ranging research and other presentations pointed out unique and local aspects of drug abuse and social health consequences that have confronted and continue to concern the city of San Diego. They also served to capture the diversity and community-based nature of drug abuse, its emergence in the community, and its resolution by the community. They underscored, once again, the necessity of establishing effective networks of drug abuse surveillance at the local level in communities throughout the world.

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**EPIDEMIOLOGY OF DRUG ABUSE:  
CITY PAPERS**

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## Metropolitan Atlanta Drug Use Trends

Katherine P. Theall, Claire E. Sterk, Tara McDonald<sup>1</sup>

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### ABSTRACT

*Cocaine and marijuana continue to dominate the Atlanta drug market according to epidemiologic indicators, with a possible increase in cocaine and a decline in marijuana suggested. According to some indicators, heroin use remains low, although emergency department rates of heroin mentions increased significantly from 1999 to 2000. Epidemiologic data indicate a possible increase in heroin use and a shift from crack smoking to heroin intranasal use by some users in the Atlanta area. The trend since 1998 of heroin purity increases in conjunction with price decreases appears to be shifting. The average level of heroin purity in 2000, as projected by the DEA's Domestic Monitor Program, was 48.6 percent, down from an overall average of almost 60.1 percent in 1999. The price jumped from \$0.30 to \$1.15 per milligram pure. The use of other opiates may be increasing, according to local ethnographic and DAWN data. MDMA ("ecstasy"), ketamine, methamphetamine, and gamma hydroxybutyrate (GHB) indicators are increasing, according to some sources. Quality of ecstasy in the Atlanta area remains questionable, and methamphetamine-OxyContin combinations have been reported. Similar to the figure reported last semester, approximately 24 percent of all AIDS cases in Georgia are related to injection drug use (18.1 percent to injection drug use alone and an additional 5.6 percent to the combination of male-male sex and injection drug use). Once again, injection-related AIDS cases in Atlanta account for a greater proportion of female than male cases (33 percent female and 16 percent male).*

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### INTRODUCTION

#### Area Description

The city of Atlanta and the Atlanta metropolitan area are very different. The city covers 131 square miles and had an estimated population of 416,474 in 2000 (according to the U.S. Bureau of the Census). The Atlanta metropolitan area includes 2,584 square miles and has an estimated population of 4,112,198.

The 20 counties that comprise the metropolitan area vary in geographic size, population size and growth, ethnic composition, and socioeconomic status. Fulton and DeKalb Counties, which include the city of Atlanta, have the largest total and minority populations. The total population in Fulton was 816,006 in 2000, of which 45.2 percent were African-American, 49.1 percent White, 5.9 percent were Hispanic, and 3.5 percent were Asian. DeKalb had a total population of 665,865; 55.3 percent were African-American, 37.0 percent were White, 7.9 percent were Hispanic, and 4.6 percent were Asian. In Clayton County, located just south of Atlanta, the total population was 236,517, including 52.7 percent African-American, 39.2 percent White, 7.5 percent Hispanic, and 5.2 percent Asian. The Hispanic population more than doubled in these three counties during the past 10 years. The African-American population increased by 180.9 percent in Clayton County, 56.7 percent in DeKalb County, and 12.2 percent in Fulton County between 1990 and 2000. Gwinnett County, the fourth largest population in the metropolitan area (588,448) is located northeast of the city. The population in this county is 74.3 percent White, 13.9 percent African-American, 10.9 percent Hispanic, and 7.9 percent Asian. The Asian population has increased dramatically between 1990 and 2000 in Gwinnett (318.5 percent), Fulton (201.3 percent), Clayton (114.4 percent), and Cobb (139.3 percent) Counties. The majority of residents in the city of Atlanta are African-American (61.4 percent); 32.6 percent are White, 4.5 percent are Hispanic, and 1.9 percent are Asian.

#### Data Sources and Time Periods

Principal data sources for this report include the following:

- Drug abuse treatment program data. The Georgia Department of Human Resources provided data on the primary drugs of abuse among the approximately 6,990 clients admitted to Atlanta's public drug treatment programs between January 1, 2000, and December 31, 2000. Data for the non-metropolitan Atlanta counties of Georgia were also reported (n = 14,638).

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<sup>1</sup> The authors are affiliated with the Rollins School of Public Health at Emory University, Atlanta, GA, and with the Department of Sociology at Georgia State University, Atlanta, GA.

- Emergency department (ED) data. Estimates of drug mentions among individuals admitted to participating metropolitan Atlanta emergency departments between January 1994 and December 2000 were provided by the Substance Abuse and Mental Health Services Administration (SAMHSA), Drug Abuse Warning Network (DAWN).
- Arrestee urinalysis data. The National Institute of Justice (NIJ) Arrestee Drug Abuse Monitoring (ADAM) program estimated drug use among recent arrestees in the local Atlanta pretrial detention center, local prisons, and jails. Data are available for all quarters of 2000, and the total sample size includes 1,115 men and 379 women. The findings for men are weighted and represent probability-based sampling; findings for women are not weighted.
- Price, purity, and trafficking data. The Drug Enforcement Administration (DEA)'s Domestic Monitor Program (DMP) provided preliminary information for 2000 on the price, purity, and source of heroin. The Atlanta High Intensity Drug Trafficking Area (HIDTA) Task Force is a coordinating unit for drug-related Federal, State, and local law enforcement agencies. Data from the Atlanta HIDTA 2002 Drug Threat Assessment provided information about the price and purity of drugs distributed in the metropolitan area, as well as information on trafficking trends.
- Ethnographic information. Ethnographic information collected from local drug use researchers is used for several purposes: (1) to corroborate the epidemiologic drug indicators, (2) to signal potential drug trends, and (3) to place the epidemiologic data in a social context. In addition, qualitative interviews were conducted with local treatment staff and clients, law enforcement officials, outreach workers, community health experts, and out-of-treatment users.
- Acquired immunodeficiency syndrome (AIDS). The Georgia Department of Human Resources provided information on AIDS cases in Georgia and the 20-county Atlanta metropolitan area from January 1981 through the third quarter of 2001 (September 30).

## DRUG ABUSE PATTERNS AND TRENDS

### *Cocaine and Crack*

Over the last several years there has been some fluctuation in the estimated rate of emergency department (ED) cocaine mentions per 100,000: 151 in 1997, 218 in 1998, 189 in 1999, and 221 in 2000 (exhibit 1). The increase comes after a period of steady, but rather slow growth. Cocaine mentions were more common among men than women in 2000 (male to female ratio of 2:1), remaining steady since 1999. The estimated rate of cocaine ED mentions was greatest among individuals age 26–34, followed by those age 35 or over. Cocaine mentions were greatest among individuals of African-American (73 percent) race/ethnicity, followed by Whites (21 percent) and Hispanics (1 percent). The most common route of cocaine administration among ED mentions in 2000 was smoking (54 percent), followed by intranasal use (3 percent). Injection related cocaine ED mentions were much greater among men than women (74 percent vs. 25 percent), and among those 35 and older.

As in the past, cocaine was reported as the primary drug of abuse for most public drug treatment admissions in metropolitan Atlanta. From the first half of 2000 to the second, cocaine admissions rose from 56 to 61 percent, an increase since the second half of 1999 (exhibit 2). During 2000, approximately 58 percent of those admitted to treatment facilities in Atlanta reported cocaine as their primary drug of abuse. The number of African-American cocaine treatment admissions is particularly high at 74 percent, while admissions for cocaine use among Whites are just under 27 percent. Hispanics accounted for less than 1 percent of the treatment population in 2000, which is comparable to their representation in 1999. The male to female ratio among cocaine users entering treatment narrowed from 1.5 in 1999 to 1.2 in 2000. At 81 percent of the total cocaine admissions, individuals 35 years and older are by far the largest age group represented, followed by 26–34-year-olds.

Smoking continues to be the most common route of cocaine administration among treatment admissions, but there has been a large drop in the percentage that may be due to changes in reporting procedures. With the addition of an “oral” route, the percentage of those smoking in 2000 (47 percent) fell from 1999 (72 percent). Those categorized as “oral” were at 39 percent, which would account for the discrepancy between the 1999 and 2000 “smoking” percentages, as the routes are presumably analogous. The number of those reporting intranasal use also dropped significantly, from 15 percent to just over 8 percent, which may also have to do with the addition of the new category.

The characteristics of clients admitted to public drug treatment programs with cocaine as the primary drug of choice in nonmetropolitan Atlanta (i.e., other counties in the State of Georgia) were similar to those reported among clients in Atlanta, with one exception—a smaller gap between the number of African-American (55.8 percent) and White (43.3 percent) users.

In the ADAM program, cocaine remains the most common drug found in positive urinalyses among adult arrestees, but particularly among female arrestees. In 2000, approximately 58 percent of adult female and 49 percent of male arrestees tested positive for cocaine (exhibit 3). Roughly 56 percent of African-American, 65 percent of White, and no Hispanic female arrestees tested positive for cocaine in 2000. Among male arrestees, approximately 51 percent of African-American, 29 percent of White, and 33 percent of Hispanic tested positive for cocaine. The largest proportion of cocaine positives among both male and female arrestees was reported among persons age 31–35 and 36 or older.

According to the Atlanta HIDTA, cocaine (in all forms) remains the most regularly encountered drug by local and Federal law enforcement. The Atlanta Police Department reported that approximately 75 percent of street seizures are crack cocaine related. Seizures of cocaine at Atlanta's Hartsfield Airport were more than double those of 1999, with 113.3 kilograms apprehended. The average price for a gram of powder cocaine and a gram of crack are both \$100, with purity levels ranging from 50 percent up to 80 percent. The most recent HIDTA Drug Threat Assessment reports the average price for a rock of crack to be approximately \$10–\$20, while ethnographic information suggests a continued prevalence of \$5 rocks, with \$3 and, at times \$1, rocks being sold to boost sales. Ethnographic research has also uncovered pockets of long-time crack cocaine smokers who are beginning to use heroin intranasally. It is primarily a means to manage their crack use, which remains the drug of choice, and is rarely seen by the users as an issue of dependence.

### *Heroin*

The estimated rate of heroin ED mentions increased slightly between 1999 and 2000, from 15 to 18 per 100,000 population, respectively (exhibit 1). From 1999 to 2000 the rate of heroin increased significantly, reaching its highest level in almost 10 years (and reflecting a 500-percent increase from 1990 to 2000). According to 2000 DAWN data, the rate of ED heroin mentions was highest among persons age 18–25 and 26–34 (26 and 24 per 100,000 population, respectively), followed by persons older than 35 (19 per 100,000). Mentions of heroin were greater among men than women (approximately 3:1), with the ratio of male to female mentions similar to that reported in 1999. The number of heroin ED mentions was greatest among African-Americans (55 percent), followed by Whites (34 percent) and Hispanics (1 percent).

Injection use continues to be the most cited route of heroin administration among ED mentions, with a slight decline between 1999 and 2000 (41 percent to 33 percent). Intranasal use remains low among ED mentions in 2000 (4 percent), as does smoking (1 percent). More men (71 percent) than women reported injection as the primary route of administration among ED mentions of heroin, and this distribution was similar to that reported in 1999. Among mentions with injection as the primary route, the greatest proportion was reported among those 35 years or older (57 percent), followed by those age 26–34 (24 percent) and 18–25 (16 percent).

The proportion of all individuals admitted to public drug treatment programs in metropolitan Atlanta from June to December 2000 with heroin as the primary drug of choice remained low (approximately 7 percent) and stable since the beginning of 2000 (exhibit 2). From 1999 to 2000, the proportion of clients with heroin as their primary drug increased (from 3 percent to 7 percent). Throughout 2000, more males (62 percent) than females were represented in the treatment population, similar to the proportion reported in 1999 (64 percent). Compared to 1999, the proportion of White and African-American clients in 2000 was nearly equivalent (48 percent and 47 percent in 2000, vs. 55 percent and 43 percent in 1999, respectively). Approximately 5 percent of the treatment population in metropolitan Atlanta in 2000 was Hispanic, compared with only 0.4 percent in 1999. In 2000, the majority of clients in Atlanta were age 35 or older (81 percent). Ethnographic reports continue to suggest the prevalence of both a young and an aging cohort of heroin users.

Among treatment clients in Atlanta, injection remains the most common route of administration. Snorting as a primary route of administration dropped from approximately 28 percent in 1999 to 18 percent in 2000, while the prevalence of smoking has slightly increased during that time.

The characteristics of clients admitted to public drug treatment programs with heroin as the primary drug of choice in nonmetropolitan Atlanta were similar to those reported among clients in Atlanta, with the exception of more White clients (81 percent) than of other racial/ethnic backgrounds. The proportion that reported heroin as a primary drug was also somewhat lower than that seen in Atlanta (1 percent vs. 7 percent).

According to ADAM data for 2000, the proportion of positive heroin results among arrestees was similar for both men and women (exhibit 3). The largest proportion of heroin positives among male arrestees occurred among those age 31–35 (4.4 percent) and those 36 or older (4.3 percent), as well as among African-American (3 percent) and White (2 percent) arrestees. Heroin positives were similarly distributed among female arrestees, with the majority of positives among women age 31–35 (6.3 percent) and 36 or older (5.5 percent), and in African-American (3.1 percent) and White (5.0 percent) arrestees.

The trend since 1998 of heroin purity increasing while the price decreases appears to be shifting. The average level of purity in 2000, as reported by the DEA, as projected by the DEA, was 48.6 percent, down from an overall average of almost 60.1 percent in 1999. Since 1999, when the average heroin price per milligram pure was \$0.85, the price has jumped from \$0.30 to \$1.15 per milligram pure. While Atlanta purity levels are dropping in comparison to previous years, they remain 10 percent above the national average. Price is also higher than the national average by about 8 percent. As has long been the case, the purity of heroin in Atlanta depends greatly on the neighborhood where it is purchased and the point of origin of the heroin. South American heroin remains the most dominant and accessible. In early July 2000, U.S. Customs Service officials seized, in two separate incidents, 3.4 kilograms of South American heroin from Venezuelan nationals on their way to Atlanta. In 2000, there was upwards of 39 kilograms of heroin seized at Hartsfield Airport, which is four times the amount seized in 1999.

Ethnographic data indicate a possible increase in heroin use during 2000. Data also suggest certain shifts in those who are using heroin. There is an increase in crack cocaine users who are both using intranasally and injecting heroin, in addition to an increase in long-time pill (primarily opiates) users, often young adult, White and middle-class, who experiment with heroin. There is also an increase among those moving on to heroin as their tolerance for pills goes up, along with the price of their habit. Ethnographers also noted hearing about a hard-packed, almost rock, form of heroin in certain areas that had not been seen previously. The theory among users was that the form was less indicative of quality as it was a form of denoting a certain “brand” without having to stamp the bags with a name.

#### *Other Opiates/Narcotics*

Although indicator data on other opiates and narcotics such as codeine, hydromorphone, oxycodone, hydrocodone, and fentanyl are limited, ethnographic reports suggest that the use of other opiates is prevalent in the metropolitan Atlanta area. Hydrocodone and oxycodone ED mentions represented only a small proportion of mentions in Atlanta, with estimated mentions of both drugs remaining relatively low from 1995 to 2000 (exhibit 4). ED mentions of oxycodone, however, have been increasing linearly over time, and there was a sharp increase in oxycodone mentions from 1999 to 2000.

Information on the price of opiates other than heroin also remains limited, but ethnographic reports indicate that hydrocodone and similar opiates often sell for \$5–\$10 on the street. Hydromorphone (Dilaudid) pills are more expensive, selling for \$40–\$80 per pill. OxyContin sells for approximately \$1 per milligram according to local users.

According to the Georgia Bureau of Investigation, there were 62 OxyContin-related deaths in 2000, and through June of 2001 45 had been reported. Reports of methamphetamine use in conjunction Oxycontin have also emerged according to local ethnographers. According to ethnographic reports, many heroin users prefer prescription opiates because they are “cleaner” and price and purity is consistent—especially with OxyContin.

#### *Marijuana*

The estimated rate of marijuana ED mentions per 100,000 population in 2000 was 86, a slight decrease from 1999 and 1998 (exhibit 1). A greater number of mentions occurred among men than women in 2000 (approximately 2:1), and the rate of marijuana mentions in 2000 among men (121 per 100,000) was more than twice that among women (52 per 100,000). The number and rate of ED mentions by gender for 1999 was similar to 2000. Marijuana ED mentions in 2000 were highest among African-Americans, followed by Whites. The rate of ED mentions was greatest among persons age 18–25 years, followed by those age 26–34 and 35 and older.

From the first half of 2000 to the second half, the proportion of clients reporting marijuana as their primary drug of choice declined from approximately 18 percent to approximately 15 percent (exhibit 2). Compared with 1999, the proportion reporting marijuana as their primary drug also decreased in 2000, from 23 percent to 16 percent. During 2000, more clients were White (52 percent) than African-American (45 percent), Hispanic (2 percent), or of another racial/ethnic background (1 percent). More males (67 percent) than females (33 percent) were in treatment for marijuana, but the gender gap has narrowed since 1999. The majority of clients reporting primary marijuana use in 2000 were age 35 or older.

Among publicly funded treatment admissions in the nonmetropolitan counties of Georgia, 24 percent of clients reported marijuana as their primary drug of choice. Characteristics of clients in the nonmetropolitan counties were similar to those reported for metropolitan Atlanta, with the exception of a larger proportion of White clients (65 percent) than clients of other racial/ethnic backgrounds.

Marijuana was slightly more common among male (38 percent positive) than female (26 percent positive) arrestees in 2000 (exhibit 3), and the percentage of positive drug screens for marijuana decreased with age among arrestees in both samples. In 2000, approximately 40 percent of African-American, 31 percent of White, and 5 percent of Hispanic male arrestees tested positive for marijuana. Twenty-eight percent of African-American, 23 percent of White, and no Hispanic female arrestees tested positive for the drug.

According to the Atlanta HIDTA, seizures of locally grown marijuana plants increased slightly in 2000, from 32,038 to 33,669. The largest percentage of the seizures occurred in northwest Georgia, less than 1 hour's driving distance from Atlanta. Importation of cannabis from outside of Georgia is still occurring, with most coming in from Mexico or Canada. In March of 2000 more than 170 pounds of Canadian marijuana and hash was seized, along with \$65,000. The imported marijuana continues to have a higher tetrahydrocannabinol (THC) level than locally grown, which averages 9.5 percent, but can go as high as 14 percent. The average price in the area is \$930 per pound.

### *Stimulants*

According to DAWN ED data for 2000, the rate per 100,000 population of methamphetamine/speed mentions increased slightly since 1999 (from 3 to 4 per 100,000 in 2000) (exhibit 1). Injection was the most common route of methamphetamine administration among ED mentions with known routes of administration for the drug, which is similar to that seen in 1999. Although no demographic information was available for methamphetamine mentions in 2000, ED mentions with injection as the reported route of administration were greater among men than women and greatest among those age 35 or older.

The proportion of clients in local metropolitan Atlanta drug treatment programs reporting stimulants as their primary drug of choice has remained relatively stable since last semester, rising from 1.3 percent in the first half of 2000 to 1.6 percent in the second half of 2000 (exhibit 2). Compared to 1999, the proportion of clients with stimulants as their primary drug also remained stable (1.7 percent in 1999 and 1.5 percent in 2000). The majority of treatment admissions in 2000 were white (98 percent), remaining stable since 1999. More men than women were among the treatment population in 2000, but the gender distribution in 2000 was nearly equivalent compared to 1999 (15 percent female in 1999 vs. 44 percent female in 2000).

Seventy-eight percent of individuals in treatment programs during 2000 were age 35 or older.

Among local treatment admissions in 2000, other routes (primarily oral, 35 percent) of stimulant administration were most common, followed by injection (27 percent), intranasal use (26 percent), and smoking (8 percent). Ethnographic data continue to reveal a wide variety of administration routes for methamphetamine and other stimulants, although intranasal use and injecting remain the most popular.

The proportion of persons who entered public drug treatment for stimulant use during 2000 in nonmetropolitan counties of Georgia also remained low (4 percent) but slightly higher than the proportion reported for Atlanta (1.5 percent). Characteristics of individuals in treatment in non-metropolitan counties were similar to those among Atlanta counties, although a slightly greater percentage reported smoking as their main route of stimulant administration than in metropolitan Atlanta (14 percent vs. 8 percent).

Methamphetamine use remains low among arrestees in 2000, with only 0.5 percent of adult male and no female arrestees testing positive for the drug (exhibit 3). Among male arrestees, methamphetamine positives were reported among white arrestees only, and the largest proportion of positives was reported among those age 26–30.

The DEA estimates that Mexican organizations control up to 80 percent of methamphetamine distribution in the United States, and, here in Atlanta, many law enforcement agencies directly link the continued rise of methamphetamine availability with a rise in the presence of migrant Hispanic workers. They also partially link the price of methamphetamine, which ranges from \$8,000 to \$20,000 per pound, to the size of the local Mexican population. Smaller quantities range cost \$100 per gram, \$200–\$275 per eightball (1/8 ounce), and \$1,500 per ounce. Along with methamphetamine imported from Mexico there has been an increase in the number of small local labs that tend to produce smaller but more potent quantities. The purity level for imported methamphetamine is around 11 percent, but locally made batches are generally not cut as often, so the levels tend to be higher. The increase in labs is reflected in an increase in lab seizures. In the first half of 2000, 27 labs were reported seized, which far surpasses the rate for 1999. Many of these local labs are run by White males and are set up in motel rooms, cars, or single-dwelling houses.

Numbers reflecting stimulant use remain low according to traditional indicators, but the increasing popularity of stimulants in Atlanta, as well as in other areas of Georgia, is quite evident according to ethnographic data and local reports. Ethnographic information suggests that among many of the younger new users, most of whom are White, the term of choice for methamphetamine is “shards.” There is also an apparent hierarchy (as with many other drugs) related to which kind of methamphetamine is used. Those who use shards, for example, scorn the use of crank and sometimes are seemingly unaware that the two are essentially the same drug. There is also an apparent trend

underway among “ravers” who previously were primarily methylenedioxymethamphetamine (MDMA) users and who have now switched over to methamphetamine.

### *Depressants*

The use of the prescription drugs diazepam (Valium) and alprazolam (Xanax) remain common as indicated by ethnographic reports, as do gamma hydroxybutrate (GHB) and flunitrazepam (Rohypnol). The price of GHB and Rohypnol have not changed since last semester, with the cost per dosage unit reported to be \$10–\$20 for GHB and \$5–\$10 for Rohypnol.

According to DAWN emergency department data for 2000, GHB mentions in Atlanta were among the highest among DAWN reporting areas. The estimated rate of GHB mentions in Atlanta per 100,000 population has increased steadily since 1994, but fell slightly from 1999 to 2000 (exhibit 1). The rate of flunitrazepam ED mentions has remained at very low levels since 1994.

### *Hallucinogens*

According to DAWN emergency department data for 2000, the rate of mentions per 100,000 population for lysergic acid diethylamide (LSD) fell slightly from 3.1 to 2.5 from 1999 to 2000 (exhibit 1). The rate of LSD ED mentions has declined steadily since 1996, although LSD remains popular according to ethnographic reports. According to the Atlanta HIDTA, the cost of LSD has not changed much over time, with dosage units costing \$4–\$10 retail and approximately \$1 wholesale. Much of the LSD that comes to Atlanta is mailed in from the western United States.

The rate of ED mentions for phencyclidine (PCP) and PCP combinations in 2000 was 0 per 100,000 population, compared with 1 per 100,000 in 1999 (exhibit 1). No PCP-positive tests were reported among the male or female arrestee population in 2000.

### *Other Drugs (Club)*

Drugs such as MDMA (“ecstasy”) and ketamine remain prevalent in Atlanta according to local ethnographers. The rate of DAWN ED mentions of ecstasy has increased steadily since 1997 (exhibit 1), with a reported rate of 2.4 per 100,000 population in 2000. Rates of ketamine ED mentions remain very low according to DAWN 2000 data.

According to the Atlanta HIDTA, the major source of MDMA in Atlanta and Georgia continues to be Europe, specifically countries like Belgium and The Netherlands. As has happened across the Nation, the HIDTA Task Force Airport Group at Hartsfield seized large amounts of MDMA last year, with more than 9,000 tablets confiscated in March 2000 alone. Notably, in February 2000 U.S. Customs Service officers intercepted a courier at Hartsfield who had swallowed 1,600 tablets in a number of balloons. This was the first time they had observed smuggling of MDMA in this manner, which is more closely associated with cocaine and heroin. The average price of a dose of MDMA remains steady at about \$20.

According to local ethnographic reports, ecstasy use is common among both men and women and among persons younger than 35. Local reports indicate an increase in the use of ecstasy among certain African-American social networks, particularly those connected to a music scene (i.e., clubs). There are a wider variety of settings where MDMA is being used, with people no longer exclusively using in clubs or at raves. Reports also suggest variable content of ecstasy pills or tablets, with reports of other substances being sold as ecstasy. Ethnographers have come across some dealers and users who have had their MDMA tested to determine the contents. Many contained cocaine, while a few had small amounts of heroin in them. Others are reporting that they are locally cutting their own MDMA with OxyContin.

## INFECTIOUS DISEASES RELATED TO DRUG ABUSE

Based on reported cases of AIDS through December 2000, Georgia remains 9th in the Nation in the cumulative number of cases, and Atlanta is 10<sup>th</sup> among selected metropolitan areas. From 1981 through the end of the third quarter of 2001 (September 30), the Georgia Department of Human Resources reported 23,628 cumulative adult and pediatric AIDS cases. Similar to that reported last semester, approximately 24 percent of all AIDS cases in Georgia are related to injection drug use: 18.1 percent are among injecting drug users (IDUs) and an additional 5.6 percent are among those in the dual risk category of men who have sex with men (MSM) and (IDU). Through the third quarter of 2001, the proportion of IDU-related AIDS cases among women is roughly 28 percent, whereas among men, only 16 percent of cases are attributable to IDU, with an additional 7 percent attributable to the dual risk

category of MSM/IDU. The proportion of cases related to heterosexual exposure is approximately 45 percent among women and 7 percent among men.

Through September 2001, 16,555 cumulative adult and pediatric AIDS cases were reported to the Georgia Department of Human Resources for the 20-county metropolitan Atlanta area. Approximately 18 percent of adult cases were directly attributable to injection drug use, a stable proportion since last semester. Men who have sex with men and inject drugs account for an additional six percent. Once again, IDU related AIDS cases account for a greater proportion of female than male cases (33 percent of female and 16 percent of male). Forty-one percent of women have been infected through heterosexual contact, and women account for approximately 14 percent of persons age 13 and over reported with AIDS in the Atlanta metropolitan area.

#### REFERENCES

Centers for Disease Control and Prevention (CDC) (2001). *Basic Statistics—Ten States/Territories and Cities Reporting Highest Number of AIDS Cases*. Data from the semi-annual *HIV/AIDS Surveillance Report*. Atlanta, GA. Retrieved November 20, 2001, from the World Wide Web: <http://www.cdc.gov/hiv/stats/top10.htm>

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EPIDEMIOLOGIC TRENDS IN DRUG ABUSE

Exhibit 1. Estimated Rate per 100,000 Population of ED Mentions in Atlanta: 1994–2000

Drug	1994	1995	1996	1997	1998	1999	2000
Cocaine	234	245	202	151	218	189	221
Marijuana	58.6	62.8	57.5	58	96	90.7	86
Heroin	17	15	14	14	17	15	18
Methamphetamine	3.6	5.5	5	7.9	5.9	3	4
GHB	0.0	0.5	1.4	2	2.9	5.1	4.6
Ecstasy	0.0	0.0	0.0	0.7	1.2	2.2	2.4
LSD	8.2	6.1	4.3	4.1	3.9	3.1	2.5
Ketamine	0.0	0.0	0.0	0.2	0.1	0.5	0
PCP	1.3	0.5	0.9	1.0	0.0	1.0	0

SOURCE: Drug Abuse Warning Network

Exhibit 2. Primary Drug of Treatment Among Public Drug Treatment Admissions in Atlanta, by Percent: 1997–2000

Drug	1H 1997	2H 1997	1H 1998	2H 1998	1H 1999	2H 1999	1H 2000	2H 2000
Cocaine	57.4	57.5	56.9	60.2	51.8	51.1	56.0	60.5
Marijuana	15.2	14.8	15.5	15.3	20.3	24.9	17.5	14.7
Heroin	4.3	5.2	5.9	5.8	4.1	1.9	6.6	6.6
Stimulants	1.7	1.9	2.0	1.7	1.7	1.7	1.3	1.6

SOURCE: Georgia Department of Human Resources

Exhibit 3. Percentage of Adult Arrestees Testing Positive for Various Drugs: 2000

Drug	Male	Female
Cocaine	48.5 percent	57.6 percent
Marijuana	38.2 percent	26.3 percent
Heroin	2.8 percent	3.4 percent
Methamphetamine	0.5 percent	0.0 percent

SOURCE: Arrestee Drug Abuse Monitoring Program

Exhibit 4. Number of ED Mentions of Hydrocodone and Oxycodone in Atlanta: 1994–2000

Drug	1994	1995	1996	1997	1998	1999	2000
Hydrocodone	0	59	14	45	58	38	40
Oxycodone	10	2	11	11	15	20	43

SOURCE: Drug Abuse Warning Network

## Drug Use Trends in Greater Boston and Massachusetts

Thomas W. Clark, B.A., and Elsa A. Elliott, M.S.<sup>1</sup>

### ABSTRACT

*Most indicators for cocaine in Boston continue to decline, while rising for heroin and staying level for marijuana. Heroin now rivals cocaine as the street drug of choice in Boston. However, both crack and cocaine drug lab submissions have risen recently, suggesting that the declining trend for cocaine may be ending. Among diverted prescription medications, oxycodone (Percocet and OxyContin) and clonazepam (Klonopin) are most frequently mentioned. Many pharmacy thefts targeting OxyContin have occurred in Greater Boston. Marijuana remains widely available, and seasonal use of psychedelics such as LSD and psilocybin mushrooms continues among youth. Club drugs such as MDMA (ecstasy), gamma hydroxybutyrate (GHB), and ketamine are still commonly reported in the club and rave scenes. MDMA in particular remains very popular among youth and young adults. Methamphetamine use is rare. Through November 1, 2001, a cumulative total of 16,629 adult/adolescent AIDS/HIV cases were reported in Massachusetts. Of these, injecting drug use accounted for 35 percent, while male-to-male sexual exposure accounted for 38 percent.*

### INTRODUCTION

#### Area Description

According to the 2000 U.S. census, Massachusetts ranks 13<sup>th</sup> in population (6,349, 097 people). The 746,914 people in Boston represent 12 percent of the total Massachusetts population. In Boston, 54 percent of residents are White, 20 percent are Black, 14 percent are Hispanic, and 12 percent are of other or multiple racial/ethnic backgrounds.

Several characteristics influence drug trends in Boston and throughout Massachusetts:

- Contiguity with five neighboring States linked by a network of State and interstate highways
- Proximity to Interstate 95, which connects Boston to all major cities on the east coast, particularly New York
- A well-developed public transportation system that provides easy access to communities in eastern Massachusetts

- A large population of college students in both the Greater Boston area and western Massachusetts
- Several seaport cities with major fishing industries (now in decline) and harbor areas
- Two international airports (Boston and Springfield) and an expanding domestic travel airport (Worcester)
- A struggling economy with increasing unemployment, declining State revenues, and social service cutbacks
- A record number of homeless individuals seeking shelter

#### Data Sources

Data sources for this report include the following:

\$ The Substance Abuse and Mental Health Services Administration (SAMHSA), Drug Abuse Warning Network (DAWN)—This source provided data on drug mentions in admissions to participating emergency departments (EDs) in the Boston metropolitan statistical area (MSA) from January 1996 through December 2000, and drug mentions in drug-abuse related deaths from participating medical examiners from 1996 through 1999.

\$ The Massachusetts Department of Public Health (DPH), Bureau of Substance Abuse Services—DPH provided data on State-funded substance abuse treatment admission data from fiscal year (FY) 1994 (starting July 1993) through FY 2001 (ending June 30, 2001).

\$ DPH Drug Analysis Laboratory—Data from analysis of drug samples were provided by DPH, 1993 through June 30, 2001.

\$ DPH, AIDS Surveillance Program—Acquired immunodeficiency syndrome (AIDS) data by year between 1993 and 2000, and cumulative data through November 1, 2001, were provided by DPH.

- Massachusetts Substance Abuse Information and Education Helpline—Drug mentions in helpline calls from January through September 2001 were provided by this source.

- The Boston Police Department, Drug Control Unit and Office of Research and Evaluation; the Massachusetts State Police; and the Drug Enforcement Administration (DEA)—Drug arrests; availability, price, and purity; and distribution patterns were derived from these sources.

<sup>1</sup> Health and Addictions Research, Inc., Boston Massachusetts

\$ Massachusetts Poison Control Center—The PCC provided data on substance abuse-related calls, 2000.

\$ Focus groups with adult clients in treatment and with adolescents in youth and treatment programs provided more in-depth information on drug use and availability.

\$ Structured interviews with needle exchange personnel, treatment providers, and law enforcement officials provided additional information on drug injecting practices.

## Drug Abuse Trends

### *Cocaine and Crack*

Most cocaine indicators continue a decline that first became apparent in 1995, but a rise in drug lab submissions and emergency department (ED) mentions may signal a reversal of this trend. Although cocaine still ranks highest in Boston drug arrests, just 9 percent of those in publicly funded treatment in FY 2001 reported crack or cocaine as their drug of choice, compared with 27 percent in FY 1994.

Cocaine ED mentions have wavered around 30 percent since 1996, reaching 36 percent in the last half of 1998, falling to 26 percent in the first half of 2000, and rising to 29 percent in the second half (exhibit 1). The proportion of Greater Boston treatment admissions reporting past-month cocaine use dropped from 40 percent in FY 1995 to 25 percent in FY 2001 (exhibit 2). Data on drug samples analyzed by the Massachusetts DPH Drug Analysis Laboratory show that cocaine and crack submissions for Greater Boston constituted 51 percent of all drugs analyzed in calendar year (CY) 1993, fell to 26 percent in 2000, and then rose to 31 percent in the first half of 2001.

Arrests by Boston police for Class B substances (cocaine and derivatives) continued to drop, from 45 percent of all drug-related arrests in 1999 to 41 percent in 2000. This is well below the all-time high of 66 percent in 1992 (exhibit 3). Boston police, outreach workers, and treatment providers all agreed that crack remains the predominant form of cocaine in the inner city although some thought cocaine powder had become more available.

In the first three quarters of 2001, cocaine or crack was mentioned in 15 percent of the Massachusetts Substance Abuse Information and Education Helpline calls for Boston in which drugs were specified, level with 2000. By contrast, alcohol was mentioned in 40 percent and heroin in 26 percent of calls. In 1999, cocaine was mentioned in 34 percent of drug-related deaths reported by DAWN medical examiners in the Boston area, down from 51 percent in 1996.

Women and Blacks continue to be disproportionately represented among Greater Boston cocaine clients, compared with the treatment population as a whole or other primary drug groups (exhibits 4, 5-1, and 5-2). In FY 2001, 38 percent of all admissions

who reported cocaine as their primary drug were female.

Of cocaine admissions, Blacks constituted 60 percent, while White admissions were 26 percent. Cocaine admissions continue to age: Those 30 or older increased from 65 percent in FY 1996 to 85 percent in FY 2001, compared with 70 percent for heroin admissions. A higher proportion of cocaine admissions had some involvement with the criminal justice system in FY 2001 (35 percent) compared with FY 1996 admissions (25 percent), and more reported a mental health problem: 32 percent in FY 2001 compared with 24 percent in FY 1996.

The DEA reported steady and wide availability of cocaine powder and crack cocaine. During April through September 2001, the DEA reported cocaine powder selling for \$50–\$90 per gram (40–65 percent pure), \$880–\$1,100 per ounce (40–90 percent pure), and \$24,000–\$32,000 per kilogram (70–90 percent pure), prices close to those in the previous half-year period. Crack, most of which is converted locally, is being sold at \$10–\$20 per rock, with purity ranging from 35 to 90 percent. The preferred variety of crack, described as hard, white, and pure, is called “mighty white.” The DEA reported that cocaine availability declined in the wake of the World Trade Center attack in New York, with dealers reluctant to enter the city.

State police reported that recent cocaine samples have been increasingly adulterated with caffeine, as well as standard adulterants such as procaine, lidocaine, benzocaine, and boric acid. The primary source for cocaine continues to be Colombia, with trafficking via California, the Dominican Republic, Florida, New Jersey, New York, Puerto Rico, and Texas.

### *Heroin*

Most heroin indicators continue to rise. The impact of widely available, low-cost, and very pure heroin is reported by treatment providers, who continue to see more heroin users seeking services. Heroin may have surpassed cocaine as the drug of choice in Boston and other areas in Massachusetts. Primary heroin admissions now constitute the largest percentage of illicit drug admissions in Greater Boston’s publicly funded treatment programs (42 percent).

The proportion of heroin mentions in Boston ED drug-related episodes rose from 20 percent in 1998 to 27 percent in the second half of 2000 (exhibit 1). The proportion of State-funded treatment admissions in Greater Boston who reported using heroin in the month before entering treatment increased steadily from 23 percent in FY 1994 to 39 percent in FY 2001 (exhibit 2). Those admissions reporting heroin as their primary drug rose from 31 percent in FY 1996 to 42 percent in FY 2001. In CY 2000, heroin arrests accounted for 27 percent of all drug arrests in Boston, up from 24 percent in 1999 and 13 percent in 1992 (exhibit 3). Heroin mentions in drug-related deaths reported in Boston by DAWN medical examiners in 1999 were

unchanged at 56 percent, compared with 34 percent for cocaine.

Data from DPH's Drug Analysis Laboratory show that heroin submissions stayed level at 17 percent of all submissions in 1999, 2000, and the first half of 2001.

In the first three quarters of 2001, heroin was mentioned in 26 percent of the Massachusetts Substance Abuse Information and Education Helpline calls that identified particular substances, similar to earlier periods.

Among primary heroin users admitted to State-funded treatment programs in FY 2001 in the Greater Boston area, the majority were male (76 percent), with Whites the largest racial/ethnic group (50 percent) (exhibit 5-1). The average age was 35, 73 percent had an annual income less than \$1,000, and 29 percent were homeless. Compared with primary cocaine users, primary heroin users in FY 2001 had the smallest proportion of Blacks (21 percent) and the lowest percentage of clients involved with the criminal justice system (22 percent) or with mental health problems (18 percent).

Injection remained the preferred route of administration for most heroin admissions in FY 2001 (65 percent), while intranasal use was reported by 29 percent, a drop from 33 percent in FY 1999.

Police contacts and the DEA continue to report wide availability, low prices, and high purity for heroin. The ounce price reported by the New England DEA for the April–September 2001 period was \$3,100–\$5,000, while a kilogram sold for \$75,000–\$120,000, both comparable to earlier periods.

Purities averaged 60 percent, with maximum purity reaching 95 percent, and bag prices ranged from \$6 to \$20. Needle exchange contacts reported that heroin quality is relatively low in Boston, so users who encounter higher-purity heroin from other cities are at risk of overdose.

According to the DEA, most heroin is transported from New York to be distributed in Providence, Rhode Island, and major Massachusetts cities including Boston, Brockton, Fall River, Holyoke, Lowell, Lynn, Lowell, Springfield, Lawrence, and Worcester. Colombia remains the main heroin source for New England, and trafficking is dominated by Dominican nationals. Boston contacts reported that heroin (“diesel”) now often comes in brown, granular chunks of compressed powder, which is bought by the gram and then resold in dose amounts in small, folded glassine bags.

#### *Other Opiates/Narcotics*

Of note is the significant rise in hydrocodone and oxycodone mentions in Boston ED data. Mentions of hydrocodone-acetaminophen (Vicodin) rose from 94 in 1999 to 196 in 2000, while mentions of oxycodone (OxyContin) and oxycodone-acetaminophen (Percocet) rose from 290 in 1999 to 590 in 2000. The DPH drug lab also reported a doubling of oxycodone samples

from 1999 (178) to 2000 (374) statewide, with 145 samples confirmed for Greater Boston alone in 2000.

State police reported well-organized trafficking in Percocet from New York, with distribution points in several Massachusetts cities. Many sources, including the State police drug lab, Boston police, treatment providers, and outreach workers, continued to report increasing seizures and mentions of OxyContin, a high-dose, time-release formulation of oxycodone. Users most often crush the drug and use it intranasally. Pharmacy thefts targeting OxyContin have been common, especially in the Boston metropolitan area.

As described by police and treatment contacts, users are primarily White, consistent with the higher involvement of Whites with prescription drug abuse overall. Some individuals who develop an OxyContin habit reportedly shift to heroin as a much cheaper and more widely available alternative.

Teenage focus groups reported that opium was occasionally available, and opium was mentioned in a small number of calls to the Helpline. However, State police have not confirmed any analyses of true opium in their submissions.

#### *Marijuana*

Marijuana remains widely available in the Boston metropolitan statistical area (MSA) and throughout Massachusetts, with indicators level or up slightly. Marijuana was mentioned in 20 percent of all ED drug episodes in both halves of 2000, up from 17 percent in 1999 (exhibit 1).

The proportion of State-funded Greater Boston treatment admissions reporting past-month marijuana use has been steady over the last three years at around 13 to 14 percent (exhibit 2). The proportion of Boston police arrests for marijuana rose slightly from 28 percent of all drug-related arrests in 1999 to 29 percent in 2000, the highest level for marijuana arrests yet recorded in these data (exhibit 3). According to police contacts, most arrests are for small quantities and involve juveniles and young adults.

As in prior years, primary marijuana users constituted only a small proportion (4 percent) of those in treatment. Compared with primary cocaine and heroin admissions, they were more likely to be young (average age 24), male (78 percent), and have criminal justice system involvement (55 percent) (exhibits 5-1 and 5-2). The percentage of Whites among marijuana clients declined and leveled off, from 35 percent in FY 1996 to 28 percent in FY 1999, while the proportion of Hispanic clients rose from 18 to 23 percent. Primary marijuana admissions were most likely to use alcohol as a secondary drug.

Police department marijuana submissions to DPH's Drug Analysis Laboratory for the first half of 2001 stayed level with those of recent years at 36 percent of all drugs analyzed, the highest for any drug. In the first three quarters of 2001, marijuana was mentioned in 4 percent of all Massachusetts Substance

Abuse Information and Education Helpline calls specifying particular drugs, level with prior periods.

According to the DEA, marijuana continues to be readily available. Prices for marijuana held steady, with commercial grade marijuana costing \$200–\$250 per ounce and \$800–\$1,500 per pound, and sinsemilla costing \$200–\$300 per ounce and \$2,500–\$3,000 per pound. Some local grows continue, but most marijuana seems to be shipped overland or via delivery services from Mexico and the U.S. Southwest, as well as from Jamaica and Colombia. Good profit margins and relatively weak penalties are incentives to traffic in marijuana, according to police contacts.

According to focus groups with teens, blunts remain the most popular means of smoking cannabis, followed by bong, pipes, and hand rolled-joints. However, one contact reported that tobacco control efforts in Boston are reducing the availability of cigars for making blunts, prompting more use of rolling papers. Teens generally regard marijuana use as uncontroversial and involving far less risk than using other substances, including tobacco.

#### *Stimulants*

Stimulant indicators remain very low in the Boston area, but reports continue to suggest that amphetamine and methamphetamine are available, if not widely used. Fewer than 10 methamphetamine ED mentions have been reported each year in Boston between 1996 and 2000 (exhibit 1). Fewer than 1 percent of all Greater Boston area treatment admissions in FY 2001 had used amphetamine in the month before admission. Similarly, amphetamine submissions to the DPH Drug Analysis Laboratory remain infrequent, and Boston police contacts reported few, if any, cases involving amphetamines or methamphetamine. However, ED mentions for amphetamine have risen from less than 10 in 1997 to 369 in 2000, suggesting that availability of amphetamines has increased on the street.

State Police indicated that methamphetamine seizures remain infrequent in Massachusetts, with most methamphetamine encountered in the State shipped from California. Users are generally students and young adults, especially those who frequent raves or have recently arrived from the west coast, where crystal methamphetamine (“ice”) is common. Biker gangs also remain among the traditional methamphetamine users. Given the popularity and availability of cocaine and heroin, it seems unlikely that methamphetamine will become a street drug of choice in Boston, as it has in some west coast cities. According to the DEA, methamphetamine prices have held steady at \$8,000–\$24,000 per pound, \$800–\$1,900 per ounce, and \$70–\$200 per gram.

#### *Depressants*

Boston ED data show that benzodiazepines were mentioned in 20 percent of drug-related episodes in 2000, down from 23 percent in 1999. Among clients entering treatment in Boston, 7 percent reported using tranquilizers in the past month. Class E substance (prescription drug) arrests in Boston in 2000 accounted for less than 1 percent of all drug arrests (exhibit 3). Prescription drugs such as clonazepam (Klonopin), diazepam (Valium), alprazolam (Xanax), and lorazepam (Ativan) were mentioned in 3 percent of all calls to the Massachusetts Substance Abuse Information and Education Helpline that specified particular drugs, with clonazepam most frequently mentioned. Poison Control reported that calls related to clonazepam were an everyday occurrence. Treatment contacts continued to report that abuse of benzodiazepines is common among illicit drug users.

#### *Hallucinogens*

Phencyclidine (PCP) and lysergic acid diethylamide (LSD) ED mentions remain quite low (exhibit 1). Fewer than 1 percent of Boston area admissions to State-funded treatment programs during FY 2001 reported past-month use of hallucinogens. Since 1993, hallucinogens have accounted for less than 1 percent of drug samples analyzed statewide by the DPH Drug Analysis Laboratory. The DEA reported that PCP was rare in most of New England, except for metropolitan areas in Connecticut.

Despite the low treatment and ED indicators for hallucinogens, use of LSD, psilocybin mushrooms (“shrooms”), and mescaline among adolescents and young adults is not uncommon, as indicated by focus groups. State Police reported that seizures of these drugs are highly variable, and typically increase around the time of large outdoor rock concerts in the spring and summer. LSD prices reported by the DEA were steady at \$5 per street dosage unit and \$300 per 100 dosage units.

#### *Club Drugs*

Although MDMA, known popularly as ecstasy or “E,” has not appeared in treatment or arrest indicators, other sources indicate that ecstasy availability and use may still be increasing. ED mentions of ecstasy rose from 16 in 1997 to 125 in 2000. The DEA, State Police, DPH Drug Analysis Laboratory, and Massachusetts Poison Control Center all continued to report many seizures, lab submissions, or calls involving MDMA. MDMA use was characterized by most contacts as still primarily a White, middle-class phenomenon, partially because of its relatively high cost. However, two sources in Boston reported that its use and distribution were increasing among non-White city youth. The rise in MDMA use is being driven by its wide availability, primarily from Europe via New York City (according to the DEA), and by its reputation as a relatively benign, mood-enhancing

substance. However, teens in focus groups reported that some users become psychologically dependent on MDMA, and “chase” the first ecstatic experience by taking more and more of the drug. Depression was reported as a consequence of frequent MDMA use.

The DEA reported that MDMA availability has continued to increase, with the retail price holding at \$20–\$30 per tablet. Similarly, the State Police lab reported that MDMA seizures continue to climb, and DPH drug lab samples of MDMA both statewide and in Boston have risen sharply from 1998 to 2000. MDMA purity reported by the State Police lab remains high, with caffeine the most common adulterant.

Significant among club drugs is gamma hydroxybutyrate (GHB), which is now controlled as a date-rape drug in Massachusetts, along with ketamine and flunitrazepam (Rohypnol or “roofies”). The Massachusetts Poison Control Center continued to report many calls concerning GHB and its precursor gamma butyrolactone (GBL), involving mostly adolescent and young adult males. Use of the anesthetic ketamine (“Special K”), a drug also popular in the club and rave scenes, continues to be reported, although less frequently than MDMA and GHB use.

The State police lab reported an increase in the number and size of recent ketamine submissions. Flunitrazepam remains rare, according to most sources.

#### *Other Drugs*

Needle exchange personnel in Northampton in western Massachusetts reported increases in steroid-injecting clients, who request extra-large needles for intramuscular injection. These clients tend to be young, straight, male bodybuilders seeking a quick increase in muscle mass reputedly made possible by steroids, which are widely available via the Internet and connections at gyms. The needle exchange in Boston reported injection of illicitly purchased hormones by transgendered youth. The State police lab reported an increase in steroid submissions, some originating from Russia and Eastern Europe.

The recreational, nonprescription use of sildenafil citrate (Viagra), especially in combination with MDMA, continued to be reported by police contacts.

#### HIV/AIDS CASES

Through November 1, 2001, a cumulative total of 16,629 adult/adolescent HIV/AIDS cases were reported in Massachusetts (exhibit 6). Of these, injecting drug use (IDU) accounted for 35 percent, while male-to-male exposure accounted for 38 percent. During 2000, 639 new adult/adolescent HIV/AIDS cases were reported in the State, down from 1999 (877 cases). Preliminary data show that IDUs accounted for 32 percent of these cases, down from 38 percent in 1999. Injecting drug use has been the greatest single factor in HIV/AIDS incidence in Massachusetts since 1993.

**Exhibit 1. Biannual Estimated Emergency Department Mentions for Selected Drugs as a Percentage of Total Drug Episodes<sup>a</sup> in Boston: January 1996–December 2000**

Drug	1996			1997			1998			1999			2000					
	IH		2H	IH		2H	IH		2H	IH		2H	IH		2H			
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)		
Alcohol-in-combination	2,791	(39)	2,559	(40)	2,575	(41)	2,315	(38)	2,585	(38)	2,229	(38)	2,211	(38)	2,361	(33)	2,615	(34)
Cocaine	2,165	(30)	1,941	(30)	1,660	(26)	1,672	(28)	2,475	(36)	1,722	(30)	1,838	(31)	1,883	(26)	2,217	(29)
Heroin/morphine	1,327	(19)	1,402	(22)	1,271	(20)	1,229	(21)	1,380	(20)	1,360	(24)	1,500	(26)	1,820	(25)	2,048	(27)
PCP	10	(<1)	...	...	11	(1)	12	(<1)	11	(1)	5	(<1)	2	(<1)	4	(<1)	7	(<1)
LSD	60	(1)	22	(<1)	27	(<1)	10	(<1)	35	(1)	25	(<1)	19	(<1)	11	(<1)	31	(<1)
Amphetamine	71	(1)	45	(1)	...	...	...	...	95	(1)	85	(1)	100	(2)	196	(3)	173	(2)
Methamphetamine	...	...	...	...	4	(<1)	9	(<1)	3	(<1)	3	(<1)	...	...	7	(<1)	...	...
Marijuana/hashish	1,091	(15)	1,036	(16)	921	(14)	847	(14)	1,484	(22)	1,423	(21)	967	(17)	1,425	(20)	1,520	(20)
Total drug episodes	7,109		6,427		6,357		5,868		6,739		6,917		5,784		7,230		7,672	
Total drug mentions	13,137		11,775		11,738		10,654		12,236		12,640		10,504		12,511		13,352	

<sup>a</sup> Percentage of episodes for which each drug was mentioned (mentions/total drug episodes).  
<sup>b</sup> Estimate does not meet standard of precision or is less than 10.

SOURCE: Office of Applied Studies, SAMHSA, Drug Abuse Warning Network, 2000 (March 2001 update)

**Exhibit 2. Percentage of Admissions to State-funded Substance Abuse Treatment Programs by Drug Used in the Past Month in Greater Boston and the Remainder of Massachusetts<sup>a</sup>: July 1, 1993–June 30, 2001**

Drug Used Past Month	FY <sup>b</sup> 1994		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Greater Boston																
Alcohol	62	(23.282)	59	(23.282)	58	(24.363)	60	(25.470)	60	(26.505)	58	(24.653)	59	(24.478)	58	(25.269)
Heroin/other opiates	23	(8.846)	28	(11.231)	29	(12.078)	28	(11.231)	32	(13.261)	32	(13.261)	34	(13.261)	35	(13.261)
Cocaine/crack	39	(15.231)	40	(15.688)	37	(15.078)	34	(13.540)	29	(11.652)	29	(11.652)	30	(11.652)	28	(11.652)
Marijuana	16	(6.231)	16	(6.231)	16	(6.231)	16	(6.231)	14	(5.369)	14	(5.369)	13	(5.369)	13	(5.369)
Other	7	(2.731)	7	(2.731)	8	(3.078)	8	(3.078)	9	(3.461)	9	(3.461)	9	(3.461)	10	(3.461)
Total (N)	(20,968)		(23,282)		(24,363)		(25,470)		(26,505)		(24,653)		(24,478)		(25,269)	
Remainder of Massachusetts																
Alcohol	62	(23.282)	60	(23.282)	60	(24.363)	59	(25.470)	57	(26.505)	56	(24.653)	56	(24.478)	54	(25.269)
Heroin/other opiates	21	(8.123)	23	(9.058)	25	(10.263)	25	(10.263)	29	(11.317)	31	(12.500)	31	(12.500)	33	(13.058)
Cocaine/crack	25	(9.592)	26	(10.263)	25	(10.263)	26	(10.263)	20	(7.546)	20	(7.546)	21	(7.546)	20	(7.546)
Marijuana	16	(6.192)	16	(6.192)	18	(7.023)	17	(6.680)	18	(6.792)	18	(6.792)	17	(6.680)	17	(6.680)
Other	8	(3.078)	10	(3.731)	10	(4.106)	10	(3.930)	10	(3.770)	10	(3.770)	11	(4.106)	11	(4.106)
Total (N)	(72,846)		(76,414)		(73,801)		(77,673)		(86,297)		(87,848)		(90,919)		(91,852)	

<sup>a</sup> Excluding prisoners and out-of-State admissions.

<sup>b</sup> Fiscal years begin July 1 and end June 30.

<sup>c</sup> Includes barbiturates, other sedatives, tranquilizers, hallucinogens, amphetamine, over-the-counter, and other drugs.

SOURCE: Massachusetts Department of Public Health, Bureau of Substance Abuse Services

Class	1990		1991		1992		1993		1994		1995	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
A—Heroin and other opiates	1,153	(17)	924	(14)	803	(13)	1,050	(16)	1,428	(21)	1,419	(22)
B—Cocaine and derivatives	4,008	(59)	4,360	(64)	4,195	(66)	4,066	(62)	3,679	(54)	3,333	(51)
C—Hashish	56	(1)	49	(1)	28	(1)	35	(1)	17	(1)	21	(1)
D—Marijuana	1,171	(17)	979	(14)	1,021	(16)	1,053	(16)	1,315	(19)	1,404	(22)
E—Prescription drugs	1,36	(1)	40	(1)	32	(1)	42	(1)	48	(1)	46	(1)
All others <sup>b</sup>	413	(6)	436	(6)	312	(5)	296	(5)	327	(5)	266	(4)
Total (N)	6,837		6,788		6,391		6,542		6,814		6,489	

Exhibit 3. Boston Police Department Arrests by Class of Substance<sup>a</sup>: January 1990–December 2000

Class	1996		1997		1998		1999		2000	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
A—Heroin and other opiates	1,148	(22)	1,508	(23)	1,061	(23)	984	(24)	1,022	(27)
B—Cocaine and derivatives	2,791	(53)	3,122	(47)	2,225	(48)	1,847	(45)	1,532	(41)
C—Hashish	37	(1)	61	(1)	81	(2)	57	(1)	50	(1)
D—Marijuana	1,127	(21)	1,745	(26)	1,211	(26)	1,133	(28)	1,093	(29)
E—Prescription drugs	34	(1)	50	(1)	38	(1)	26	(1)	20	(1)
All others <sup>b</sup>	147	(3)	122	(2)	48	(1)	50	(1)	53	(1)
Total (N)	5,284		6,608		4,664		4,097		3,770	

<sup>a</sup> Includes all arrests made by the Boston Police Department (i.e., arrests for possession, distribution, manufacturing, and trafficking).

<sup>b</sup> Includes possession of hypodermic needles, conspiracy to violate false substance acts, and forging prescriptions.

SOURCE: Boston Police Department, Office of Planning and Research.

Exhibit 4. Characteristics of Admissions to Greater Boston State-funded Substance Abuse Treatment Programs<sup>a</sup> by Percentage: July 1, 1994–June 30, 2001

Characteristic	FY 1995 <sup>b</sup>	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001
Gender							
Male	73	72	72	75	74	76	77
Female	27	28	28	25	26	24	23
Race							
White	44	45	47	47	48	48	48
Black	39	38	35	33	32	33	30
Hispanic	13	14	14	15	16	16	18
Other	4	4	3	4	4	4	4
Age at admission (Average age)	(34.2)	(34.6)	(35.1)	(35.5)	(36.5)	(36.7)	(36.5)
19-29	31	2	2	2	2	2	2
30-39	42	26	25	24	22	21	22
40-49	19	42	43	42	41	40	36
50+	6	20	22	23	21	29	29
Marital status							
Married	12	11	10	10	10	10	10
Separated/divorced	22	22	22	22	21	18	18
Never married	66	68	68	68	69	71	72
Annual income							
<\$1,000	55	56	59	58	58	62	64
\$1,000-\$9,999	28	29	26	26	26	21	19
\$10,000-\$19,999	10	9	9	9	8	9	8
\$19,999+	7	7	7	7	8	8	9
Homeless	20	24	32	31	31	30	34
Criminal justice system involvement							
Mental health	25	27	26	26	28	27	26
No prior treatment	78	77	79	77	76	78	78
No treatment but has problem	6	5	3	3	3	3	2
Prior treatment (counseling or hospitalization)	16	18	18	21	21	20	19
Needle use in past year	21	21	22	25	26	26	27
Total (N)	23,282	24,363	25,470	26,505	24,653	24,478	25,269

<sup>a</sup> Excludes prisoners and out-of-State admissions

<sup>b</sup> Fiscal years begin July 1 and end June 30.

SOURCE: Massachusetts Department of Public Health, Bureau of Substance Abuse Services

Exhibit 5-1. Client Characteristics in Greater Boston State-funded Substance Abuse Treatment Programs by Drug of

Demographic Characteristic	Cocaine/Crack					Heroin/Opiates						
	FY <sup>a</sup> 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001
Gender	59	60	60	59	59	62	70	69	72	72	75	76
Male	41	40	40	41	41	38	30	31	28	28	25	24
Female												
Race/Ethnicity												
White	25	24	23	22	22	26	50	49	47	49	51	50
Black	64	63	64	63	60	60	25	25	24	24	25	21
Hispanic	9	10	10	11	10	12	21	21	23	22	23	25
Other	3	2	3	3	3	3	4	4	6	5	5	5
Age at admission (Average age)	(32.6)	(32.8)	(33.7)	(35.2)	(35.5)	(36.0)	(34.0)	(34.5)	(34.6)	(35.2)	(35.3)	(35.1)
<19	1	1	1	1	<1	1	1	1	1	1	<1	1
19-29	35	31	28	19	18	15	30	28	29	27	27	29
30-39	50	53	53	56	55	55	45	45	42	42	40	39
40-49	13	13	16	21	23	26	21	24	24	25	27	25
50+	2	2	2	4	4	4	3	3	4	6	5	6
Marital status	10	9	10	11	10	11	12	11	10	10	11	10
Married	17	16	19	18	16	17	22	22	21	22	19	17
Separated/divorced	73	75	71	71	74	72	66	68	69	70	70	73
Never married												
Annual income												
<\$1,000	59	59	56	56	59	58	61	67	67	67	72	73
\$1,000-\$9,999	29	28	28	28	24	22	29	23	23	23	16	15
\$10,000-\$19,999	7	8	11	10	10	11	7	6	6	6	7	6
\$20,000+	5	5	5	6	7	9	4	4	4	4	5	6
Homeless	24	28	27	23	21	24	19	28	26	26	22	29
Criminal justice involvement	25	25	29	34	34	35	23	20	19	22	22	22
Mental health problem	24	23	26	29	30	32	24	19	20	21	18	18
Needle use in past year	6	5	5	6	5	7	61	64	63	63	63	58
Total (N)	(5,526)	(4,920)	(3,869)	(3,165)	(2,837)	(2,283)	(7,079)	(7,359)	(9,240)	(8,915)	(9,137)	(10,553)

Choice<sup>3</sup> and Percentage: July 1, 1995–June 30, 2001

<sup>a</sup> Excludes prisoners and out-of-state admissions  
<sup>b</sup> Fiscal years begin July 1 and end June 30.

SOURCE: Massachusetts Department of Public Health, Bureau of Substance Abuse Services

Exhibit 5-2. Client Characteristics in Greater Boston State-funded Substance Abuse Treatment Programs by Drug of Choice<sup>a</sup> and Percentage: July 1, 1995–June 30, 2001

Demographic Characteristic	Marijuana						Alcohol					
	FY <sup>b</sup> 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001
Gender												
Male	82	76	79	76	73	78	79	80	81	81	82	82
Female	18	24	21	24	27	22	21	20	19	19	18	18
Race/Ethnicity												
White	35	37	30	28	28	28	52	55	56	55	55	51
Black	43	39	45	44	47	46	33	30	30	30	31	32
Hispanic	18	20	22	23	21	22	12	12	11	12	12	14
Other	3	4	4	4	4	3	4	3	3	3	3	3
Age at admission (Average age)												
<19	(24.3)	(24.0)	(23.8)	(25.1)	(25.4)	(24.2)	(36.9)	(37.5)	(38.1)	(39.1)	(39.2)	(39.2)
19-29	26	33	34	24	19	27	2	2	2	1	1	1
30-39	53	43	44	50	56	51	22	19	17	15	14	14
40-49	16	18	17	17	18	16	40	40	41	39	38	36
50+	4	5	5	6	5	6	24	26	27	32	34	35
50+	1	1	1	2	2	1	12	13	13	14	14	14
Marital status												
Married	6	6	6	4	5	5	11	10	10	10	10	10
Separated/divorced	6	5	5	6	7	6	25	25	26	24	22	21
Never married	88	89	89	90	88	89	64	65	64	66	68	69
Annual income												
<\$1,000	60	58	55	59	55	57	51	54	53	51	55	57
\$1,000-\$9,999	26	28	28	26	27	22	29	27	27	28	27	22
\$10,000-\$19,999	9	10	11	10	12	13	11	10	10	10	10	9
\$20,000+	5	5	6	4	6	8	10	9	10	11	11	12
Homeless	9	8	7	9	10	11	30	38	40	40	41	43
Criminal justice system involvement	55	47	55	62	57	55	29	27	28	28	26	25
Mental health problem	31	41	32	28	31	29	21	20	23	24	23	22
Needle use in past year	2	1	2	2	2	2	4	4	4	4	5	4
Total (N)	(995)	(1,119)	(1,143)	(1,125)	(1,109)	(1,098)	(10,490)	(11,833)	(11,980)	(11,154)	(11,099)	(11,025)

<sup>a</sup> Excludes prisoners and out-of-State admissions

<sup>b</sup> Fiscal years begin July 1 and end June 30.

SOURCE: Massachusetts Department of Public Health, Bureau of Substance Abuse Services

Exhibit 6. Biannual Incidence of Massachusetts Adult/Adolescent AIDS Cases by Exposure Category by Percentage:  
January 1993 to December 2000, and Cumulative Through November 1, 2001

Mode(s) of Exposure	Reporting Period										Cumulative as of 11/1/01
	1993	1994	1995	1996	1997	1998	1999	2000			
Men/sex/men	(36)	(32)	(31)	(30)	(27)	(26)	(23)	(22)	(22)	(38)	
Injecting drug user (IDU)	(40)	(39)	(42)	(39)	(40)	(34)	(38)	(32)	(32)	(35)	
Men/sex/men/IDU	(4)	(4)	(4)	(3)	(3)	(2)	(2)	(1)	(1)	(4)	
Transfusion/blood components	(2)	(1)	(2)	(2)	(1)	(1)	>1	(1)	(1)	(2)	
Heterosexual <sup>a</sup>	(10)	(13)	(12)	(15)	(13)	(13)	(12)	(15)	(15)	(10)	
Undetermined/Other	(8)	(10)	(9)	(11)	(16)	(23)	(24)	(28)	(28)	(11)	
Total Adult/Adolescent Cases (N)	1,733	1,459	1,365	1,126	883	906	877	639			16,629

<sup>a</sup> Includes persons who have had heterosexual contact with high-risk individuals (e.g., IDUs); as of 4/1/96, heterosexual cases formerly based on Pattern II criteria are classified as undetermined.

SOURCE: Massachusetts Department of Public Health, AIDS Surveillance Program